## **ABSTRACT OF THE DISCLOSURE**

[059] The present invention is directed to a system for filling sample chambers with liquid. The system includes a substrate defining the sample chambers and having a fill port, and a network of passageways connecting the sample chambers to the fill port. The system also includes a substrate support to retain the substrate in a fill position and a valve module on the substrate support. The valve module has a fill port seal opening to connect with the fill port of the substrate in the fill position, and a vacuum opening for connection to a source of vacuum. The system further includes a valve body having a liquid outlet port and a vacuum port, and means for operating the valve body so that the liquid outlet port and the vacuum port are alternately in fluid communication with the fill port seal opening.

LAW OFFICES
FINNEGAN, HENDERSON,
FARABOW, GARRETT,
& DUNNER, L. L. P.
1300 I STREET, N. W.
WASHINGTON, DC 20005
202-408-4000